

WHAT IS CLAIMED IS

5

SD  
A16

10

15

20

25

1. An optical scanning device comprising:  
a light source;  
a coupling lens coupling a beam emitted from  
said light source;  
a light deflector deflecting the beam from  
said coupling lens at a uniform angular velocity;  
a line-image imaging optical system disposed  
between said coupling lens and light deflector, and  
causing the beam to image a line image long along main  
scanning directions on or in the vicinity of a  
deflection reflective surface of said light deflector;  
a scanning and imaging optical system causing  
the beam deflected by said light deflector to image a  
beam spot on a medium to be scanned; and  
an optical housing in which said light source,  
coupling lens, light deflector, line-image imaging  
optical system and scanning and imaging optical system  
are disposed, and contained, and  
wherein a plurality of holding and fixing  
datums for holding and fixing a light-source part

comprising said light source and coupling lens are provided in at least one of said light-source part and optical housing.

5

2. The device as claimed in claim 1, wherein:  
said light deflector is covered by a cover;  
said cover has a window for the beam to be  
incident on and exit from said light deflector; and  
a transparent cover member can be mounted on  
said window, and  
wherein said holding and fixing datums are  
determined so that, by selectably using said holding and  
fixing datums, the beam deflected by said light  
deflector passes through said scanning and imaging  
optical system approximately at the same position  
whether or not said transparent cover member is mounted.

20

3. The device as claimed in claim 1, wherein  
said light-source part and line-image imaging optical

25

Category	Item	Value	Unit
Energy	Electricity	100	kWh
	Gas	100	therms
	Oil	100	barrels
	Coal	100	tons
Water	Water	100	gallons
	Wastewater	100	gallons
	Stormwater	100	gallons
	Recycled Water	100	gallons
Waste	Landfill	100	cubic yards
	Incineration	100	tons
	Recycling	100	tons
	Composting	100	tons

4. The device as claimed in claim 1, wherein said coupling lens and line-image imaging optical system are formed integrally.

5. The device as claimed in claim 1, wherein said light-source part comprises a plurality of light-emitting sources.

6. The device as claimed in claim 3, wherein the beam emitted from said light-source part comprises an approximately parallel beam.

25

7. The device as claimed in claim 4, wherein the beam emitted from said light-source part comprises an approximately parallel beam.

5

8. An optical scanning device comprising:  
a light-source unit emitting a beam;

10 a first imaging optical system causing the beam emitted by said light-source unit to image at a predetermined position;

a deflector receiving the beam from said first imaging optical system and performing scanning with the  
15 beam; and

a second imaging optical system causing the beam from said deflector to image a beam spot on a surface to be scanned, and

wherein:

20 said light-source unit, first imaging optical system, deflector and second imaging optical system are mounted in a box housing;

a transparent member of an approximately parallel plate is disposed detachably so as to be  
25 located between said first imaging optical system and

P/K

TOP SECRET

deflector and between said deflector and second imaging optical system; and

4/12  
a mounting position of said second imaging optical system can be changed according to whether or  
5 not said transparent member is provided.

10 9. The device as claimed in claim 8, wherein the mounting position of said second imaging optical system along main scanning directions can be changed according to whether or not said transparent member is used.

15  
20 10. The device as claimed in claim 8, wherein the mounting position of said second imaging optical system along directions of an optical axis thereof can be changed according to whether or not said transparent member is used.

25

914

11. The device as claimed in claim 8, wherein  
the mounting position of said second imaging optical  
system along main scanning directions and directions of  
an optical axis thereof can be changed according to  
5 whether or not said transparent member is used.

10 12. An optical scanning device comprising:  
light emitting means for emitting a beam;  
coupling means for coupling the beam emitted  
by said light emitting means;  
light deflecting means for deflecting an  
15 incident beam at a uniform angular velocity;  
line-image imaging means for causing the beam  
coupled by said coupling means to image a line image  
long along main scanning directions on or in the  
vicinity of a deflection reflective surface of said  
20 light deflecting means;  
scanning and imaging means for causing the  
beam deflected by said light deflecting means to image a  
beam spot on a medium to be scanned; and  
an optical housing in which said light  
25 emitting means, coupling means, light deflecting means,

line-image imaging means and scanning and imaging means are disposed, and contained, and

wherein a plurality of holding and fixing datums for holding and fixing a light-source part

5 comprising said light emitting means and coupling means are provided in at least one of said light-source part and optical housing.

10

13. An optical scanning device comprising:

light-source means for emitting a beam;

first imaging means for causing the beam

15 emitted by said light-source means to image at a predetermined position;

deflecting means for receiving the beam from said first imaging means and performing scanning with the beam; and

20 second imaging means for causing the beam from said deflecting means to image a beam spot on a surface to be scanned, and

wherein:

said light-source means, first imaging means,

25 deflecting means and second imaging means are mounted in

[illegible]

5

10

15

20

25



prises:

- a light source;
- a coupling lens coupling said light source;
- a light deflector deflected by said coupling lens at a uniform angular rate;
- a line-image imaging optical system between said coupling lens and light deflector, directing the beam to image a line in the scanning directions on or in the vertical section reflective surface of said scanning and imaging optical system;
- a scanning and imaging optical system receiving beam deflected by said light deflector, focusing said beam to form a spot on a medium to be scanned;
- an optical housing in which said coupling lens, light deflector, light source, optical system and scanning and imaging optical system are disposed, and contained, and
- wherein a plurality of mounting means for holding and fixing a line image arising said light source and scanning and imaging optical system are provided in at least one of said optical housing.

a coupling lens coupling a beam emitted from  
t source;

5           a light deflector deflecting the beam from  
said coupling lens at a uniform angular velocity;

a line-image imaging optical system disposed between said coupling lens and light deflector, and causing the beam to image a line image long along main scanning directions on or in the vicinity of a deflection reflective surface of said light deflector;

a scanning and imaging optical system causing the beam deflected by said light deflector to image a beam spot on a medium to be scanned; and

15                    an optical housing in which said light source,  
coupling lens, light deflector, line-image imaging  
optical system and scanning and imaging optical system  
are disposed, and contained, and

wherein a plurality of holding and fixing  
20 datums for holding and fixing a light-source part  
comprising said light source and coupling lens are  
provided in at least one of said light-source part and  
optical housing.

LA

5

image so as to form a visible image;

image to a sheet recording medium; and

10

comprises:

15

imaging optical system and performing scanning with the

20

wherein:

25

[illegible]

a mounting position of said second imaging optical system can be changed according to whether or not said transparent member is used.